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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,712	11/21/2003	Hans Ulrich Frutschi	003-094	8850
36844	7590	08/23/2005		
CERMAK & KENEALY LLP 515 E. BRADDOCK RD ALEXANDRIA, VA 22314			EXAMINER VERDIER, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			3745	
DATE MAILED: 08/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,712

Applicant(s)

FRUTSCHI, HANS ULRICH

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-2-04, 12-22-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Receipt and entry of Applicant's Preliminary Amendment dated November 21, 2003 is acknowledged.

Drawings

Figure 2a should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure is objected to because it contains the phrases "The present invention" (line 1) and "According to the invention" (lines 3- 4) which are implied and should be deleted, because it contains the legal terms "means" (lines 5 and 7) which should be deleted, and because in the last line, "(Fig. 2b)" should be deleted. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: Appropriate correction is required.

On page 1, line 4, "DESCRIPTION" is superfluous and should be deleted.

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On page 1, line 5, "TITLE" is superfluous and should be deleted.

Claim Objections

Claims 12-13 are objected to because of the following informalities: Appropriate correction is required.

Claim 12 should end with a period.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 7, lines 3-4 have been amended to claim that the supporting walls are arranged substantially perpendicularly to the direction of flow of the intake airstream. The specification is limited to the supporting walls being arranged essentially perpendicular to the direction of flow of the intake airstream. Therefore, the addition of the limitation "substantially" adds new matter. Claim 10, lines 4-7 have been amended to recite "injecting water with the silencer into the intake airstream substantially directly upstream of a first compressor stage ... spraying device." The

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specification is limited to injecting water with the silencer into the intake airstream essentially directly upstream. Therefore, the addition of the limitation “substantially” adds new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 10, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8, line 3 recites “nozzles”, while claim 8, lines 4-5 recite “means for injecting water ... via the nozzles”. It is unclear what structure the “means for injecting water” encompasses, and the “means for injecting water” appears to be the same element as the nozzles 33. Claim 15, lines 1-2 which recite “the means for injecting water” are unclear for the same reason. In claim 10, lines 6-7, “optionally downstream or upstream of a further water spraying device” renders the claim indefinite, because this claim language in combination with the terms “or both” (line 5) and “optionally” (line 5) makes it unclear exactly what permutations are included in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-3, 5, and 9-10 (as far as claim 10 is definite) are rejected under 35

U.S.C. 102(b) as being anticipated by Japanese Patent Publication 2000-352,320 (figures 1 and 2a-2b). Note the silencer 2 for attenuating noise occurring in an intake airstream of a gas turbine 4/5/6, comprising means 8/17 for the introduction of water, steam, or both into the intake airstream, with the silencer comprising plural tubular elements 12 arranged substantially parallel to the direction of flow of the intake air flow, and unnumbered cavities between the tubular elements which are configured and arranged for a silencing action, due to their location in the silencer 2. The tubular elements each have a variable diameter that changes along their length (note the rounded upstream portions of tubular elements 12 in figure 2a). Also disclosed is a method of increasing or regulating the power output of the gas turbine, comprising providing the gas turbine with the silencer, and operating the silencer to increase or regulate the power output of the gas turbine, with water being injected into the intake air flow substantially directly upstream of a first compressor stage 4.

Claim 1 is also rejected under 35 U.S.C. 102(b) as being anticipated by Heufler 4,828,175. Note the silencer 7, 17, 18, 25, 32, 42 for the attenuation of noise occurring in an intake airstream of a gas turbine, comprising means 11 for the introduction of water, steam or both into the intake airstream. The recitation in claim 1, lines 1-2 of "for the attenuation of noise occurring in an intake airstream of a gas turbine" is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the

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claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). The prior art structure is capable of attenuating noise occurring in an intake airstream of a gas turbine.

Claims 1-2, 5, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lamy 3,710,889. Note the silencer 4 for the attenuation of noise occurring in an intake airstream of a gas turbine 1 comprising means for the introduction of water, steam, or both, into the intake airstream, with the silencer further comprising plural tubular elements 5 arranged substantially parallel to the direction of flow of the intake air flow. The tubular elements each have a diameter that changes along their length, with the tubular elements each comprising a constriction 9 in a middle region.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 15, as far as they are definite and understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication 2000-352,320 in view of Utamura 6,378,284. Japanese Patent Publication 2000-352,320 discloses a silencer substantially as

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claimed as set forth above, including nozzles 17 for spraying water, but does not disclose that the water droplet size sprayed from the nozzles is within the range of 10 to 50 microns.

Utamura (figure 1 and column 2, lines 38-41 and column 4, lines 49-51) shows a gas turbine engine 1, 2, having nozzles 11 that inject water into the intake of the gas turbine engine, with the water droplet size sprayed from the nozzles being 50 microns or less, or 10 microns, for the purpose of providing for power augmentation and thermal efficiency augmentation of the gas turbine engine.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the nozzles of Japanese Patent Publication 2000-352,320 such that the water droplet size sprayed from the nozzles is within the range of 10 to 50 microns, as taught by Utamura, for the purpose of providing for power augmentation and thermal efficiency augmentation of the gas turbine engine. Concerning claim 15, which recites that the means for injecting water comprises means for injecting a water quantity beyond the saturation limit, nozzles 17 of the Japanese Patent 2000-352,320 are capable of injecting a water quantity beyond the saturation limit.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lamy 3,710,889. Lamy (figure 1) discloses a silencer substantially as claimed as set forth above, with each tubular element 5 including an inlet side and an outlet side, with the constrictions 9 being configured and arranged such that the elements have substantially the same diameter on the inlet side and on the

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outlet side. However, Lamy does not disclose that the diameter in the middle constriction region is smaller by 20 to 30 percent.

The recitation of the diameter in the middle constriction region being smaller by 20 to 30 percent of the inlet side and outlet side diameters is a matter of choice in design. The size of the venturi created by the constriction 9 is a result-effective variable known to influence the noise reduction. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to select size of the constriction in the middle region to be a specific value, such as smaller by 20 to 30 percent of the inlet side and outlet side diameters, for the purpose of optimizing the noise reduction, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, and 8, respectively, of copending Application No. 10/717,711. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application 10/717,711 recite a fogging device for introducing water into an intake air flow of a gas turbine, with the fogging device comprising sound-absorbing means, while the claims of the instant application recite a silencer comprising means to introduce water into the intake air stream of a gas turbine. The claims are therefore considered to not be patentably distinct from each other because the respective claims encompass one another. Concerning claim 15 of the instant application which recites that the means for injecting water comprises means for injecting a water quantity beyond the saturation limit, the nozzles in claim 8 of the copending application 10/717,711 are capable of injecting a water quantity beyond the saturation limit, because any nozzle is capable of this function.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Ritland, Kelley, and Illbruck are cited to show gas turbines with water injectors in the form of nozzles located in the intake air stream.

Jahn is cited to show a gas flow silencer in the form of a muffler for a gas turbine engine.

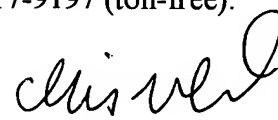
Hoffman is cited because it was mentioned in the specification by Applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
August 18, 2005


Christopher Verdier
Primary Examiner
Art Unit 3745